

The Cary Arboretum

of The New York Botanical Garden



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In This Issue:

Dr. Elias Returns from China
Music Fills the Air at Cary
"Sun Day," Every Day
Tree Avenue Leads to Educational Experience
Exhibit of Fiber Arts

Music Fills the Air at Cary

Two more chamber concerts at the Arboretum will "fill the air with music" on Sunday afternoons in July.

On July 9, the Filigree Chamber Group will perform selections by Bach, Doppler, Debussy, and Enesco, with participation by flute, harp, and viola.

July 30 will bring a resounding combination of trombone, tuba, French horn, and trumpets played by the Hudson Valley Brass Quintet. The numerous composers, whose works will be played on the Cary outdoor stage, include Scheidt, Brahms, Satie, and Ewald.

The inaugural concert in the Arboretum-sponsored series, May 28, was attended by nearly 300 people who heard a 20-piece orchestra of the Hudson Valley Philharmonic conducted by Maestro Imre Pallo. The program featured works of Handel, Ives, Wagner, and Joplin. The setting, as for all four concerts in the series, was a magnificent natural bowl in a field bordering the hemlock ravine behind the Gifford House.

Concert-goers are treated to pre-concert tours of the solar-heated Plant Science Building, and wine and cheese receptions held after the programs at the Gifford House where music-lovers are welcome to browse through the Cary Gift Shop and enjoy the current watercolor exhibit by local artist Marge Wheeler.

In case of rain, concerts will be presented in the Arboretum's Plant Science Building on the Sharon Turnpike. Tickets for the remaining concerts are available at Kading's Corner News in Millbrook, the Education Center in the Gifford House, and by mail. For more information, please call 677-5343.



The Gala Inaugural Concert held May 28, and the Renart Trio aided by three well-known page-turners. Left to right are Carole Cowan, Violin; Darrel Edwards, Manager of the Hudson Valley Philharmonic; Willard W. Payne, Director of the Cary Arboretum; Todd Crow, Piano; Imre Pallo, Director, Hudson Valley Philharmonic; and Luis Garcia-Renart, Cello. The Trio performed on the Arboretum stage June 11.

Dr. Elias Returns from China

"It was fantastic—a lifetime of experiences..."

Dr. Thomas S. Elias, exhausted from jet-lag, but exuberant with information to share, came "home" to the Arboretum June 21 after an extensive trip to China.

The trip, arranged by the Botanical Society of America, included a group of ten American botanists whose intentions were to re-establish ties with the botanical community in the Peoples Republic of China, and to re-assess the status of the plant science program there.

An exchange of information, valuable to the Americans and Chinese as well, was also a main object during this venture. Dr. Elias lectured in several cities including Peking, Shanghai, and Nanking, and was rewarded by successfully broadening the international seed-exchange program, which is a key program of botanical institutions throughout the world.

The group's interest was concentrated on theoretical aspects of research. They were treated with concern by their Chinese hosts who graciously provided tours of botanical gardens and institutes, agricultural research stations, and four universities. They toured Canton, Kunming, Shanghai, Hangchow, Suchow, Wuhan and several other cities including Hongkong which, according to Dr. Elias "must be the biggest trade center in the world — there are shops everywhere!"

The visiting Americans were apparently just as interesting to the Chinese as the hospitable Chinese were to the Americans: Large crowds of Orientals surrounded the "foreigners" in city streets, and on one occasion, police were summoned to clear a traffic jam caused by the curiosity-seekers.

Back in his air-conditioned office, Dr. Elias is sorting out rolls of film, cataloging seeds, and preparing lectures on his journey to "... a country where there is a strong feeling of working together towards a common goal — to build a better China."

The September issue of the Arboretum Newsletter will feature an article by Dr. Elias expanding on his visit to China.



“Sun Day”, Every Day

by Robin Parow

It was moving day. Shafts of sun-rays streamed through the skylights and onto the deep green carpet as people walked briskly through the building. Some carried boxes, others brought in books, microscopes — arms-full of what was most important and required personal delivery. It was the beginning of a new work day in mid-April, the first day of work in a new environment for Arboretum staff members who would occupy the brand new desks and labs at last.

Work stations filled quickly with typewriters; empty laboratories echoed as bottles and jars were placed on shelves. There was a special excitement that could be generated only by a special building — one resulting from years of research directed to answering urgent problems of energy conservation.

The Cary staff members, with great anticipation, were finally moving into their new quarters at the solar-heated Plant Science Building on the Sharon Turnpike. Some adjusted quickly: “Hey! There’s more room here! And better light!” Some uttered discontentment: “I was in the middle of photocopying a report, and the time controlled lights went out! Guess I dialed five minutes of light instead of fifteen!”

Everyone found the new office design in the Plant Science Building a marked change from the previous setting in the converted farmhouses on Fowler Road. Instead of many small offices which require individual heating units, this new building offers one large area divided into sixteen 11-foot by 12-foot “work stations.” The lighting is also unique; instead of standard office lighting with banks of ceiling-level fluorescent tubes eating energy, “task lights” are being installed to make this community office a light-controlled environment. Each individual desk is designed to be lit by ceiling fixtures which conserve electricity and supply light that is much less harsh — and less energy-consuming — than standard lighting arrangements.

The building’s occupants felt this move was more than a matter of changing offices — it was a step into the future. Slanted ceilings of wood and acoustical tiles offer a new dimension in interior design. And what are those long white ropes for? In passing, horticulturist Carol Young pulled one gently, and a skylight seventeen feet above her opened to illuminate a segment of the room.

In the true style of experimentation, staff members discovered movable white panels that slide away from windows or doors to reveal the beautifully landscaped yard featuring many plants and shrubs from the Arboretum’s unique collection. The purpose of these panels is to help insulate the building. On an introductory tour for the

staff, Dr. Payne explained that heat loss, even through double-glazed windows is greater than comparable areas of wall and the use of these panels during the winter months will decrease the heat loss dramatically.

A principal object of curiosity to staff members and outside visitors, of course, is the building’s solar heating system. The solar collectors mounted on the roof face south so that the building is in the best possible position to benefit from the sun’s energy which warms a mixture of water and antifreeze circulating inside the collectors. The heat is then transferred by means of a series of heat exchangers to plain water stored in two heavily insulated, underground concrete tanks with a total capacity of 15,000 gallons. Hot water is released from these tanks into a series of heating coils; fans blow air over the coils, and this warm air is circulated through ducts in the building.

Downstairs in the mechanical equipment room, Jim Boice, one of the staff “experts” on the use of solar heating units, explains the functions of the pipes, pumps, tanks — all the components that make the system work. Glancing to a thermometer which indicates the temperature of the solar collectors, he may say, “Temperature’s down to 135° . . . is it cloudy out?” And with a nod, you confirm that it is. Jim, aided by Dick Livellara and Owen Vose, see that the building’s heating and cooling functions run smoothly.

With this new building design, a specialized vocabulary has emerged: “borrowed light,” “console,” “light shaft,” “DMS 2400,” “still.” Signs around the building acquaint visitors with these words, but, without explanations, you may wonder about some of their meanings.

The reception area that one sees upon entering the main door is the switching point for all phone calls coming into the building. The 56-button “console” is linked to a highly intricate, computerized system that can handle 100 inside extensions, 24 trunk lines, and at the same time indicate to the attendant (switchboard operator) which lines are busy, not answering, or are being transferred to another extension. This system was designed by the ITT Company and was installed by Standard Telephone Systems, Inc., of Passaic, New Jersey. Staffers have quickly adjusted to the system’s intricacies, including one “science-fiction” feature that forwards a phone call to you automatically if you are visiting in another part of the building.

Since 80% of the building is underground, some of the new occupants wondered why a certain portion of the library is flooded

with natural light, although there are no windows in sight. “Borrowed light” originating on the roof of the main floor is directed down to the library through a “well” (a double plexiglass panel) placed fifteen feet below a skylight. Thus, two floors are lit by one source.

This versatile building also has a still! But don’t misunderstand — the Arboretum staff realizes that liquor and plant research do not mix. This is a specialized still that turns well water into distilled water for use in the labs. Through a boiling process, impurities in the water are left behind as sediment, while the water turns to steam and back to water again. This purification process provides chemists and researchers with impurity-free water that will not unwittingly modify chemical reactions during experimentation.

The control room, which can also be considered the clockworks for this sophisticated structure, is a room containing the DMS 2400 — a computer manufactured by the Robertshaw Controls Company. This piece of equipment is designed to automatically monitor all heating and cooling functions every five minutes, and, when necessary, switch to another mode of operation so as to use the least amount of commercial power.

Since the official opening of the Plant Science Building, visitors have come from many areas to see this exceptional experiment in energy conservation. In celebration of “Sun Day” (May 3), 1,200 visitors attended three day-long festivities which included tours through the building, as well as an invitation — good on any working day — to use a very extensive selection of solar-oriented reading material from the Cary Library.

Visitors are welcome to tour the Plant Science Building (as well as the Arboretum Greenhouse) on Wednesdays and Sundays between 1:30 and 3:30 p.m. Tours through these buildings are given by volunteers who are eager to answer any questions you may have to provide better insight into the functions of the Cary Arboretum.

Meanwhile, the new “tenants,” the Arboretum staff members, are becoming completely “solarized.” Jargon recently overheard in the lunch room: “What’s the solar gain in your lab today? We’ve been picking up BTU’s all weekend from Tank #2 . . .”

The camera catches striking architectural shapes outside and inside the building. These photos, and others in this issue, by Robin Parow.



Tree Avenue Leads to Educational Experience

For the second consecutive year, the planting season has been marked by impressive progress on the Arboretum's major tree avenue.

Horticulturist Bob Hebb spent a good part of the winter months refining long-range plans for the avenue, which extends along a stretch of the internal road system beginning at the intersection of Fowler Road and Redwing Drive, and continuing over Filkins Bridge through the intersection of Redwing and West Flagler Drive to N.Y. Highway #82.

The entire avenue is an aesthetically pleasing one. It is being designed so that trees, which are planted in pairs 60 feet apart on either side of the paved road, will clearly illustrate different forms, leaf color, texture, and shade effects of each variety. As the trees mature over the years, home owners and other observers will be able to stroll or drive through the avenue to study in detail these tree specimens and their habits of growth. In this way, the careful observer can more readily determine what species would best suit individual outdoor landscape needs. This unique avenue of trees will also serve as a valuable teaching tool in woody plant identification classes. These will be offered to students of both the Mid-Hudson region and the New York Botanical Garden. The latter group, in the near future, will be temporary residents of the Arboretum while attending horticulture classes here.

Although the trees are presently only five to eight years old, they already provide an interesting and pleasing display. Of course, when they reach semi-maturity during the next ten to twenty years, they will have illustrated different forms in the course of their development. This will be an education in itself to the observant tree lover, regardless of whether or not he is a student at the Arboretum.

The young trees were purchased from the Princeton Nursery and the MSK Nursery of Seattle. In addition, a donation was made to the Arboretum by the Detmer Estate in Tarrytown, New York, while some seedlings from Japan and Spain were obtained through an international seed exchange program. All these specimens have been combined to form the permanent collection, and they already serve as a pleasant, informative addition to the continually-growing Arboretum grounds.

Beginning at Filkins Bridge, pairs of trees include Mountain Ash (*Sorbus alnifolia*), Chinese Elm (*Ulmus parvifolia*), Bald Cypress (*Taxodium distichum*), Dawn Redwood (*Metasequoia glyptostroboides*), Larches, (*Larix decidua*), Ginko (*Ginkgo biloba*), and many others.

This attractive part of the Arboretum grounds formerly had been flat, empty meadowland. It was chosen for the display avenue after consultation with the Arboretum's Wildlife Biologist Jay McAninch, who researched the area and confirmed that there would be minimal deer damage to any trees planted in the area. Expanses of woodland which offer cover for the Arboretum "resident" deer herds, are sufficiently far away from the plantings, and the deer are reluctant to enter open areas for feeding purposes.

The plantings are a continuation of the major tree avenue project which was introduced last year under the overall supervision of Carlton Lees. Through the efforts of Bob Hebb and Grounds Crew Supervisor John Bouton, the project's progress is providing a handsomely-decorated avenue to be enjoyed by Arboretum visitors and students for many years to come.

Exhibit of Fiber Arts at Gifford House

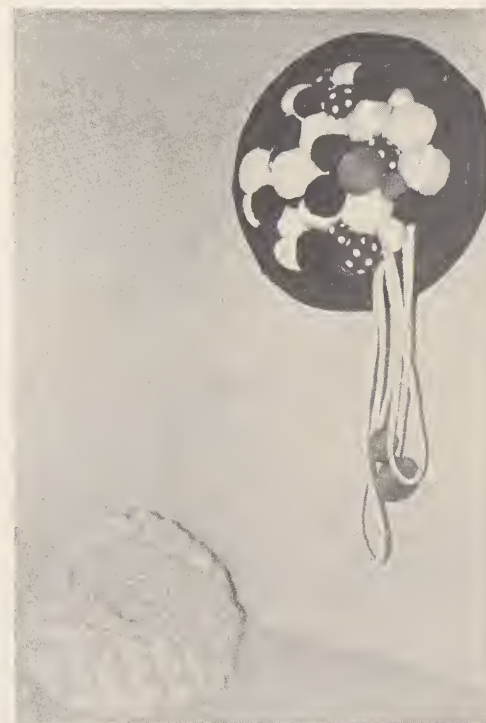
Fiber Artist June Payne of Millbrook will exhibit a creative variety of textile arts beginning July 22 at the Gifford House Education and Visitor Center on the Sharon Turnpike.

A gallery opening on Sunday, July 23 is scheduled, and an invitation to this "artful event" is extended to all Friends of the Arboretum, and the general public as well.

The art of textiles, as exemplified by June Payne's work is a unique combination of stitching, weaving, stuffing, embroidery, and macrame combined in many forms to produce handsome effects in sculptured pillows, throws, and wall-hangings.

Benefiting from a creative childhood atmosphere, June was encouraged by her parents to develop her artistic interests. In commenting on the creative aspect of textiles, she says she felt comfortable in this medium of art and "zeroed in on it" 26 years ago. Since then, she has gained a national reputation for her work.

The opening reception for the exhibit, at which the public is welcome, will be held between 1:30 and 4:30 on July 23. This unique textile arts display will be exhibited Tuesday to Sunday 1:30-4:30 p.m. through Sept. 23. For more information, please call 677-5358.



"Concert Day", a stuffed hanging, and "Carriage Trade", a coil basket-form with unspun embellishments, by textile artist June Payne.

People at the Arboretum

BONNIE FIERO, Greenhouse Manager: A soft-spoken young woman who grew up working in her parents' small greenhouse . . . She attended SUNY at Cobleskill, majored in Ornamental Horticulture, and graduated in 1971.

She currently is the only female staff member working at the Greenhouse. "I work like everyone else and feel I am treated with respect." She has been on the Arboretum staff for five years and previously was employed at Carlson's Greenhouse in Cold Spring, New York.

Bonnie and her husband Robert, who is employed by the Harlem Valley Psychiatric Center, spend most of their free time working on their new home in Poughquag . . . She enjoys camping and likes animals, but says she is happiest when she is working with plants . . .

For Bonnie Fiero, her favorite hobby is an extension of her profession; her



profession is an extension of her favorite hobby.

New phone number for
Arboretum Administration and Research
677-5343

Around the Arboretum

Children's "Paint-Off"

There was a troll under the bridge and "Madame Flora" posed in the greenhouse reciting poetry. Mother Nature occupied a regal position in the meadow while a mime danced and flutist echoed from the "deep dark forest".

As a result of this man-made magic, 200 children, ages eight to ten, produced original works of art at a "Paint-Off" held May 31 at the Gifford House Education and Visitor Center. The paintings are currently on display at the Gifford House and the solar-heated Plant Science Building.

Arboretum staff members and volunteers, along with professional artists and performers from the Dutchess County Arts Council, The Mid-Hudson Arts and Science Center, and The Taconic Arts Center all participated in this first Paint-off, which may become an annual event.

The children responded artistically to brief nature talks and the visual excitement by documenting their feelings on paper, using colorful poster paints. Mostly fingers and "natural elements" were used for paint application, providing the exhibition jurors with a wide selection of designs and textures to choose from for the final display.

The exhibit contains a selection of art work that was reduced from 200 entries to 50 paintings by a jury of local artists who voted on artistic qualities of each piece of the children's work.

Visitors are welcome to view the display between 8:30 a.m. and 4:30 p.m. Monday through Friday.

Dr. Tillman to Venezuela

Dr. Robert (Gus) Tillman, Wildlife Ecologist, is on a three-month assignment with UNESCO (United Nations Educational, Scientific, and Cultural Organization) at the Instituto Universitario Pedagógico de Caracas, in Venezuela.

During his stay, Dr. Tillman is helping to plan and organize the biological aspects of a research program in natural resources.

This work is being carried out in collaboration with two other UNESCO consultants, who will cover the mathematical and chemical aspects of environmental science.

The project is sponsored by the United Nations Development program (UNDP), with UNESCO as the executing agency.

Children's Nature Program at Gifford House

A general introduction to nature for children between the ages of eight and twelve will be offered during a two-week period in August.

An appropriate setting for such a learning experience, the 2,000 acre grounds of the Cary Arboretum offer excellent accommodations for this "outdoor classroom" including a wide variety of habitats for environmental studies.

The first week, (August 7-11) will encompass a Monday through Friday program beginning each morning with a nature walk followed by subject-related activities in the Gifford House Educational Center on the Sharon Turnpike. Subjects will be: "The Ways of Insects", "Leaves and Flowers", "Pond Life", "Little Plants of the Summer Woods", and "Wildlife in Summer".

The second week, (August 21-25) will involve daily instruction in understanding ecology. Each day will begin with a close look at several nature communities to see how they are similar, different, and changeable. Meadow, forest, and marsh will be emphasized. Since most of the class time will be spent in the various habitats, appropriate clothing is recommended.

The class will meet 9:00-11:30 a.m. Monday through Friday. Fee for each week of the course is \$20. For more information, call 677-5358.

Rent-a-Kid Training

In late June, the Arboretum's Education Department conducted a two-day training course for youngsters who hope to qualify for yard-work jobs this summer under the "Rent-a-Kid" program.

Sixteen high-school age youth spent a Saturday and Sunday at the Arboretum learning about basic care of lawns and gardens, care of trees and shrubs, and maintenance of garden equipment. Instructors were James Boice, Joseph Blank, and John Bouton of the Arboretum staff.

The youngsters came from Millbrook, Poughkeepsie, Hyde Park, Beacon, Fishkill, Pine Plains, and Wappingers. They were paid at minimum wage rates for their learning experience, and the Arboretum was compensated for its staff time. Funds were provided by the Dutchess County Office of Human Resources.

The newly-trained yard-work "experts" are available for summer employment through the Rent-a-Kid Office of the County Youth Bureau. The telephone number is (914) 485-4697.

WANTED: Volunteers of All Kinds

Ever have an urge to work with exotic plants or houseplants other than your own? Do you like the idea of learning about the Greenhouse or the Solar Building's innovative design so that you could lead a tour through these facilities?

Volunteers are needed to fill these positions immediately. Training sessions are given to anyone interested in dedicating some time to interpreting the Cary Arboretum to the public.

Meet new people, learn new things, stay as long as you like . . . Volunteers are an important extension of the Cary full-time staff who could not carry out their programs without you.

Tour guides usually lead groups of between 5 to 20 people who visit the Arboretum with a genuine interest in learning about its functions. Guides are needed on Wednesday and Sunday afternoons between 1:30 and 4:00.

For more information on becoming a volunteer, please call Mrs. Marcia Davis at the Gifford House Education and Visitor Center, 677-5358.

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of
THE NEW YORK
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